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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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909	7590	04/07/2004	EXAMINER	
PILLSBURY WINTHROP, LLP			CHO, UN C	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
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DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,922

Applicant(s)

EINAMO, KARI

Examiner

Un C Cho

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Drawings

1. The drawings were received on 1/29/2004. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 – 5, 7 – 8 and 10 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Sanmugam (WO 96/15643).

Regarding claim 1, Sanmugam teaches a method of subscriber activity in a radio communications network which comprises functional entities for subscriber mobility management, the method comprising transmitting and receiving signalling messages in a functional entity, characterized by receiving a trace command in said functional entity, the command indicating the tracer and identifying the particular subscriber to be traced, starting tracing which comprises the steps of: copying a signalling message in response to the reception or transmission of a signalling message related to the subscriber to be traced, and sending a copy to the tracer (pg. 45, line 12 – pg. 48, line 3).

Regarding claim 2, Sanmugam teaches that the trace command can select the type of activity to be traced, and the signalling message is copied only

if it is of the type of activity to be traced (pg. 45, line 12 – 14; pg. 47, line 35 – pg. 48, line 3).

Regarding claim 3, Sanmugam teaches that tracing starts whenever the subscriber activity is selected for tracing and the subscriber's tracing class is activated (pg. 46, line 22 - 26).

Regarding claim 4, Sanmugam teaches that tracing stops when MSC deactivates tracing for mobile subscriber (pg 48, line 21 - 35).

Regarding claim 5, Sanmugam teaches that tracing is deactivated by operator commands (pg 46, line 31 - 33).

Regarding claim 7, Sanmugam teaches a radio communication network comprising subscribers, at least some of the subscribers being able to roam within the coverage area of the system, one or more network elements (MSC, VLR, HLR) in which signalling messages are received and transmitted to manage subscriber mobility, operating means for giving instructions to the network element, characterized in that the operating means are arranged to give a trace command to the network element (MSC, VLR, HLR), the command indicating the tracer and identifying at least one subscriber whose signalling messages are to be traced, the network element (MSC, VLR, HLR) is arranged to copy signalling messages related to the subscriber in response to the trace command and to send a copy to the tracer (pg. 45, line 12 – pg. 51, line 25).

Regarding claim 8, Sanmugam teaches the trace command also indicates the type of the signalling message to be traced, and the network element (MSC,

VLR, HLR) is arranged to copy the signalling message related to the subscriber to be traced if it is of the type to be traced (pg. 47, line 2 – 4 and pg 50, line 4 - 31).

Regarding claim 10, Sanmugam teaches a network element of a radio communication network which receives and transmits signalling messages to manage subscriber mobility, characterized in that the home system comprises reception means for receiving a trace command, which indicates the tracer and identifies at least one subscriber whose signalling messages are to be traced, separation means for separating the signalling messages of the subscriber to be traced from other signalling messages, copying means for copying the signalling messages related to the subscriber to be traced, and transmission means for sending copies to the tracer (pg. 47, line 1 - 26).

Regarding claim 11, Sanmugam teaches the trace command also indicates the type of activity to be traced, and the separation means are arranged to separate the signalling messages that belong to the activity of the type to be traced from the signalling messages of the subscriber to be traced (pg. 47, lines 1 – 4 and 19 - 26).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6, 9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanmugam in view of Fletcher et al (US0000019212H).

Regarding claim 6, Sanmugam teaches tracing of signaling message. However, Sanmugam fails to teach that the signalling messages of the MAP protocol are traced. In contrast, Fletcher teaches that messages between the VLR and an external HLR utilize MAP protocol interface (Col. 18, line 31 – 39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Fletcher to Sanmugam to provide software entities that correspond with equipment and components of conventional telecommunication systems, and to provide for effective communication and cooperation between such elements.

Regarding claim 9, Sanmugam teaches that the signalling messages to be traced are type of activities, and the network element is arranged to start copying of the signalling messages related to the subscriber. However Sanmugam fails to teach that signalling messages to be traced are of the MAP protocol and that the network element is arranged to start copying of the signalling messages related to the subscriber in response to the dialogue of the MAP protocol, which starts after the trace command and is related to the subscriber to be traced. In contrast, Fletcher teaches that messages between the VLR and an external HLR utilize MAP protocol interface (Col. 18, line 31 – 39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

provide the teaching of Fletcher to Sanmugam to provide software entities that correspond with equipment and components of conventional telecommunication systems, and to provide for effective communication and cooperation between such elements.

Regarding claim 12, Sanmugam teaches that the network element is responsive for the reception, separation, copying and transmission means. However, Sanmugam fails to teach that the network element comprises an MAP entity. In contrast, Fletcher teaches that messages between the VLR and an external HLR utilize MAP protocol interface (Col. 18, line 31 – 39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Fletcher to Sanmugam to provide software entities that correspond with equipment and components of conventional telecommunication systems, and to provide for effective communication and cooperation between such elements.

Response to Arguments

6. Applicant's arguments filed 1/29/2004 have been fully considered but they are not persuasive.

The applicant argued that Sanmugam failed to teach tracing signaling messages and a network element arranged to copy signaling messages related to the subscriber in response to the trace command and to send a copy to the tracer.

The examiner disagrees to the argument presented by the applicant and the reasoning is as followed:

- a. Sanmugam teaches that signaling is being traced by the home system, in which the home system is part of a network element tracing signaling messages. (Sanmugam, Page 47, lines 19 – 22).
- b. Sanmugam teaches copying (MSCa reports the activity of M1 back to the home system) a signaling message in response to the reception of a signaling message related to the mobile station and reporting to the home system (Sanmugam, Page 48, lines 5 – 8).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

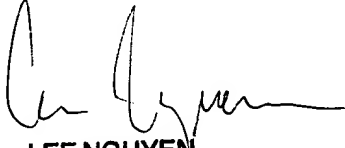
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C Cho whose telephone number is (703)305-8725. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703)308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Un C Cho UC
Examiner
Art Unit 2682
3/31/2004



LEE NGUYEN
PRIMARY EXAMINER